

BIL'DYAYEV, B.; LINKEVICH, Yu.; BURDYUKOV, V.

Cushioning the compass card. Mor. flot 18 no.4:17 Ap '58.  
(MIRA 12:12)

1.Rabotniki elektroradionavigatsionnoy kamery Murmanskogo parokhodstva.  
(Compass)

LINKHOVIN, Lkhanaran-Ledonovich

[Through the countries of Africa] Po stranam Afriki. Ulan-Ude, Buriatskoe knizhnoe izd-vo, 1961. 47 p. illus.  
(MIRA 15:10)

(Africa, West--Description)

LINKIEWICZ, J.;KEPINSKI, A.

Establishment of the Well-Boring Section of the Polish Association of Sanitary Engineers and Technicians. p. 65.

GAZ, WODA I TECHNIKA SANITARNA. (Stowarzyszenie Naukowo-Techniczne Inżynierów i Techników Sanitarnych, Ogrzewnictwa i Gazownictwa) Warszawa, Poland.  
Vol. 33, No. 2, Feb. 1959.

Monthly list of East European Accessions Index (EEAI), LC, Vol. 8, no. 6,  
June 1959  
unclia.

LINKIEWICZ, J.

Wells or water mains for villages. p. 188

GAZ, WODA I TECHNIKA SANITARNA (Stowarzyszenie Naukowo-Techniczne Inżynierów i Techników Sanitarnych, Ogrzewnictwa i Gazownictwa) Warszawa, Poland.  
Vol. 33, no. 5, May 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 9, September 1959  
Uncl.

38877  
S/188/62/000/003/002/012  
B111/B112

AUTHORS: Linkin, V. M., Kolesnikov, N. N.

TITLE: Particle interaction in nonlinear electrodynamics

PERIODICAL: Moscow. Universitet. Vestnik. Seriya III. Fizika,  
astronomiya, no. 3, 1962, 17-26

TEXT: It is shown that the interaction, in nonlinear theory, of a point-like particle with an extended one, approximately coincides with the interaction in linear theory between two particles having distributed charges and magnetic moments. Proceeding from the invariant

$I = \frac{1}{16\pi} f_{\mu\nu} f_{\mu\nu}$ , where  $f_{\mu\nu}$  is an antisymmetric tensor of the electromagnetic field, the Lagrange function  $L(I) = \frac{-1}{16\pi} \epsilon(I) f_{\mu\nu} f_{\mu\nu}$  is set up, where  $\epsilon(I) = \frac{\partial L}{\partial I}$ . The Maxwell equations then are  $\frac{\partial f_{\mu\nu}}{\partial x_\nu} = 0$ ;  $f_{\mu\nu} = \epsilon_{\mu\nu\lambda\eta} f_{\lambda\eta}$ .

$\frac{\partial P_{\mu\nu}}{\partial x_\nu} = 0$  where  $P_{\mu\nu} = \epsilon(L) f_{\mu\nu}$ . The energy momentum tensor  $H_{\mu\nu}$  is

Card 1/4

S/188/62/000/003/002/012  
B111/B112

Particle interaction in...

determined in the same way as in the linear theory.  $H_{44} = (1/8\pi)(DE + HB)$ .  
If, in the linear theory  $\vec{E}_1 = \vec{D}_1$  is written for the electrostatic field,

then  $\vec{E} = \frac{\vec{D}}{\epsilon(D^2)} = \vec{D} \int_0^{r_e/D} q' dv'$  in the nonlinear theory. Since

$\vec{E}_e = \vec{D}_e = \frac{er}{r^3}$ , it follows that

$$\vec{E} = \vec{D} \int_0^r p' du' = \frac{er}{r^3} \int_0^r p' du' = e - \nabla \int \frac{p'(r') du'}{|R - r'|}$$

holds for sufficiently large  $r$ . In the linear theory,  $q'(r')$  is that charge distribution which produces exactly the same field  $\vec{E}$ , as is produced by the charge  $e$  in the nonlinear theory. For the dipole field an asymptotic representation is given in large distances, a concrete solution of which is possible only by successive approximations. For the nonlinear

Card 2/4

Particle interaction in...

S/188/62/000/003/002/012  
B111/B112

interaction between a point-like and an extended electric charge, the following is derived:

$$W_{12} \approx H_{12} = \frac{1}{4\pi} \int \left( e_1 V_1 \int \frac{\rho_1(r_1) dv_1}{|R_1 - r_1|} \right) \left( e V_2 \int \frac{\rho'(r') dv'}{|R_2 - r'|} \right). \quad (31)$$

The interaction of two dipole moments is subject to considerations similar to those which hold for the electric charges. When the simultaneous electric and magnetic interactions are taken into consideration, a linear theory is obtained only in those ranges where

$$|I_1| = \frac{1}{8\pi} |D^2 - H^2| < |I_1^0|.$$

Fig. 1 shows the curve of  $|I_1|$  for  $D = e/r^2$  and  $H = \mu/r^3$ . If the experimental values of  $e$  and  $\mu$  for the electron and proton are used,  $r_1^{(e)} \sim 2.3 \cdot 10^{-11}$  cm and  $r_1^{(p)} \sim 3 \cdot 10^{-14}$  cm are obtained. Hence it follows that  $|I_1^0|$  is larger than the maximum of  $|I_1|$ . Therefore, the proton like

Card 3/4

Particle interaction in...

S/168/62/000/003/002/012  
B111/B112

the electron can be calculated linearly if it is point-like, e.g. if it does not interact with a meson field. For the energy  $H_{12}$  we have

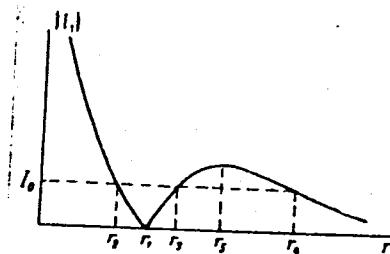
$$H_{12} \approx \frac{1}{4\pi} \int \vec{D}_1 \vec{D}_2'' dv + \frac{1}{4\pi} \int \vec{H}_1 \vec{H}_2'' dv$$

which corresponds to the interaction of two particles with distributed charges and magnetic moments in the linear theory. There is 1 figure.

ASSOCIATION: Kafedra elektrodinamiki i kvantovoy teorii (Department of  
Electrodynamics and Quantum Theory)

SUBMITTED: June 6, 1961

Fig. 1



Card 4/4

LINKIN, V.M.; KOLESNIKOV, N.N.

Particle interaction in nonlinear electrodynamics. Vest.  
Mosk. un. Ser. 3: Fiz., astron. 17 no.3:17-26 My-Je '62.  
(MIRA 15:6)

1. Kafedra elektrodinamiki i kvantovoy teorii Moskovskogo  
universiteta.  
(Nuclear reactions) (Electrodynamics)

I 33242-66 EWT(d)/T/EWP(1) IJP(e) OO/PP/GD/LXT(bf)  
ACC NR: AT6000562 SOURCE CODE: UR/0000/65/000/000/0096/0102  
52  
87

AUTHOR: Linkin, V. N.

ORG: none

TITLE: Construction of generalized characteristics of two-dimensional images

SOURCE: AN SSSR. Institut nauchnoy informatsii. Chitayushchiye ustroystva (Reading devices). Moscow, VINITI, 1965, 96-102

TOPIC TAGS: pattern recognition, character reading equipment, reading machine

ABSTRACT: A method for representing plane images of geometric figures for reading devices is proposed. Mathematical functions representing a position or scale of simple images in cases where it is necessary to consider many images simultaneously are derived. The general form of these representations and their properties are analyzed by the use of Fourier transformations. Sample solutions forming group matrices were solved in three separate examples. The first group represents all special displacements in a plane, the second group represents the rotation of the input representations in the same plane, and the third group represents displacements and rotations of the plane about the origin of coordinates. This method allows the image representations to be classified into groups which are composed by the machine and the class with maximum characteristics of the input function is selected. Orig. art. has: 32 formulas, 1 figure. 16C

SUB CODE: 09/ SUBM DATE: 09Sep65

Card 1/1 L5

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7

LINKIN, V.V., vrach

Hemeralopia. Zdorov'e 4 no.9:31 8 '58  
(VISION)

(MIRA 11:10)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7"

LINKIN, V.V., YAKOVLEV, A.A.

Exhibition of ophthalmological instruments of the K. Zeiss Company  
(Jena) in the Helmholtz State Scientific Research Institute of  
Eye Diseases. Vest. oft. 71 no.5:61-62 S-0 '58 (MIRA 11:10)  
(OPHTHALMOLOGY, appar. & instruments  
exhibit in Germany (Rus))  
(EXHIBITS,  
ophthalmol. appar & instruments in Germany (Rus))

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7

LINKIN, V.V., vrach

What is conjunctivitis? Zdorov'e 5 no.9:30 s '59.  
(MIRA 12:11)  
(CONJUNCTIVITIS)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7"

LINKIN, V.V.

Shortcomings of projection perimeters and methods for eliminating  
them. Med.prom. 14 no.1:24-28 Ja '60. (MIRA 13:5)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut glaznykh  
bolezney imeni Gel'mglo'tsa.  
(PERIMETRY)

YEFIMOV, I.I.; LINKISHKIN, V.M.; SAVENKOV, V.G.; TSVETKOV, A.I.

Truck for the removal, installation and hauling of motor compressors and motor fans for LM-57 streetcars. Rats.  
predl. na gor. elektrotransp. no.9:40 '64.

(MIRA 18:2)

1. Depo im. Smirnova Tramvayno-trolleybusnogo upravleniya  
Leningrada.

34973

S/080/62/035/002/013/022  
D244/D302

18.12.10 (2408)

AUTHORS: Marchenko, N. A., Kakovkina, V. G. and Linko, S. K.

TITLE: Anodizing of aluminum alloys as a method of preparation before electro-plating

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 2, 1962, 338-341

TEXT: The authors present results of an investigation into the anodic behavior of complex shaped aluminum castings AL2 (AL2), AL9 (AL9), AL4 (AL4) and large machine component mouldings AL5 (AL5) and AL10B (AL10V) in standard chromium-plating electrolytes. After the anodizing treatment, the chrome-plating takes place to a thickness of 100 - 150  $\mu$  to increase the wear-resistance. Alloy AL10V was studied in greater detail. Its structure is characterized by the presence of cuprous components ( $CuAl_2$ ) and silicon in the general background of solid solution. The kinetics of formation of an oxide film were investigated by weighing the specimens. In the case of alloy AL10V a loss of weight was observed and was explained  $\checkmark$

Card 1/3

Anodizing of aluminum ...

S/080/62/035/002/013/022  
D244/D302

by the solution of impurities contained in the specimen surface. At the same time the oxide film thickens as could be seen from the increase in the bath-voltage. The anodizing treatment is preceded by digestion in an alkaline solution followed by electro-polishing in the mixture of acids ( $\text{HNO}_3 + \text{HF}$ ). During the digestion, silicon present on the surface dissolves with the formation of silicic acid. During the electro-polishing cuprous compounds dissolve and silicon shows almost no change. After the anodic polarization the cuprous components ( $\text{CuAl}_2$ ) are completely removed. To reveal the active parts of the surface short processes of chrome- and copper-plating were conducted. In the first stage of the process chromium deposit formed in the pores and places from which impurities were removed during the alkaline digestion. When the chromium-plating was carried out on the surfaces not previously anodized then a chromium film was deposited over all the surface. Analogous results were obtained for copper-plating. Good adhesion of the chromium film was obtained for the anodizing treatment with current density of  $10 - 15 \text{ A/dm}^2$  and process duration of 1 - 3 minutes. Good adhe-  
*X*

Card 2/3

Anodizing of aluminum ...

S/080/62/035/002/013/022  
D244/D302

sion was also obtained for the chromium film after the unodizing treatment, in which the alkaline digestion was not followed by electro-polishing. There are 5 figures and 10 references: 7 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: S. Barnik and R. Pinner, Sheet Metal Ind., 32, 1955; Bernard E. Bunce, Metal Finish J., 1, 1954.

SUBMITTED: October 8, 1960

X

Card 3/3

ARISTOV, L.I.; CHUPRINA, R.T.; LINKO, V.N.

Dihydrocyquinolymethane. Metod. poluch. khim. reak. i prepar.  
no.11:53-55 '64. (MIRA 18:12)

1. Tomskiy politekhnicheskiy institut imeni S.M. Kirova.  
Submitted April 1964.

LINKO, Ya.

Double action drawing die. Prom.koop. no.12:28-30 D '55.  
(MIRA 9:5)

1. Nachal'nik tsekha arteli "Krasnyy shtampovshchik".  
(Dies (Metal-working))

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7

LIN'KOV, Yo.M.; LIN'KOV, A.M.

Positive feedback in a seismograph circuit. Geofiz. prib. no.15:  
129-134 '63.  
(MIRA 17:4)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7"

8(6)

SOV/112-59-4-6546

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 4, p 21 (USSR)

AUTHOR: Avdeyeva, A. A., and Lin'kov, A. N.

TITLE: Some Problems in Gas Fuel Combustion

PERIODICAL: Naladechnyye i eksperim. raboty ORGRES, Nr 15, 1958, pp 209-223

ABSTRACT: Tests of industrial plants have shown that in switching boilers from the anthracite culm over to a gas fuel, the superheater-steam temperature drops 25-30°C. In switching boilers from a liquid fuel over to a gas fuel, the superheated-steam temperature rises by 15-20°C. In this connection, to preserve the superheated-steam temperature, it is expedient to burn the gas with a dull flame in the first case, and to burn it with a bright flame in the second case. The efficiency of gas burning that is determined by the chemically incomplete combustion depends on: the relation between the dynamic pressures of air and gas  $n$ , the stream turbulent agitation, shape and size of gas-orifice ports, shape and size of embrasure, and other factors. On the basis of tests conducted with four boilers having external-mixing burners and four boilers

Card 1/2

SOV/112-59-4-6546

Some Problems in Burning Gas Fuel

having internal-mixing burners, the following conclusions are drawn: For various cases of air-gas mixing, optimum values of  $n$  vary widely. For an external-mixing burner, the heat loss due to chemically incomplete combustion decreases with increasing  $n$ . The best results have been obtained with  $n = 0.1$ . With a bright flame combustion, the central-gas-distribution burner should be used; with a dull flame, the preliminary-mix burner should be used. With the vortex-type air supply, the best results were obtained from a peripheral-gas-distribution burner. Within 90,000-140,000 kcal/m<sup>3</sup>hr in the furnace, the proper burner design would reduce losses due to chemically incomplete combustion to a minimum for both bright and dull flames. The central-gas-distribution burners are most rational as they are simple to manufacture, convenient to mount and repair, and reliable in operation.

S.M.Sh.

Card 2/2

LIN'KOV, A.V.

The PLB-1 continucus line for processing pulpwood of firewood  
aspen. Biul.tekh.-ekon.inform. no.2:39-41 '62. (MIRA 15:3)  
(Woodpulp industry--Equipment and supplies) (Aspen)

LETTER, . . .

Production of Paper Insulated Power Cables Rated up to 10 kv (Proizvodstvo silovykh kabley s bumazhnoy izolyatsiyey do 10 kv), Rosenergoizdat, 1952, 110 pages.

This book covers technological problems involved in the production of power cables with impregnated paper insulation rated up to 10 kv. Chapters are devoted to problems of weaving and insulating of cable cores, drying and impregnating of paper insulation, leading and armoring of cables, and to technological control of manufacturing processes and check testing of cables. Special attention is devoted to operating conditions in individual stages of cable manufacture.

The book is intended for engineers, technicians, and shop workers in the cable industry, but may also be of use to employees of municipal cable networks.

So: W-30262

VINARSKIY, Ye.N., inzhener; LINKOV, A.V., inzhener; MAZING, I.V., inzhener;  
CHERETYANKO, V.I., inzhener; YAKHINA, R.I., inzhener; CHUPRINA,  
N.A., inzhener; PLOTNIKOVA, M.Z., inzhener; LEVPSCH, A.M., inzhener;  
LELYAKOVA, L.P., inzhener; MANDALOVSKAYA, M.V., inzhener; UZUMKUYAN,  
I.D., inzhener; SEVRYUKOV, Ye.G., inzhener; VINARSKIY, Ye.N., redaktor;  
ALADOVA, Ye.I., tekhnicheskij redaktor

[Metal demountable headframe] Prokhodcheskie metallicheskie sborno-  
razbornye kopyry. Moskva, Ugletekhizdat, 1954. 110 p. (MLRA 8:4)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut organizatsii  
i mekhanizatsii shakhtnogo stroitel'stva.  
(Mine buildings)

Linkov, A. V.

112-6-11900

Translation from: Referativnyy zhurnal, Elektrotehnika, 1957, Nr6, p.19 (USSR)

AUTHOR: Linkov, A.V.

TITLE: A Preliminary evaluation of the Electrical Homogeneity of Rubber  
(Predvaritel'naya otsenka elektricheskoy odnorodnosti reziny)

PERIODICAL: Informatsionno-tehnich. sbornik, M-vo elektrotehnich. prom-sti SSSR,  
1955, #84, pp. 22-24

ABSTRACT: The electrical homogeneity of nonvulcanized rubber can be ascertained by passing of a tape of rubber through a standard carrying a h-v electrode, which is a rod having a few points set at a distance from the rubber tape. The electrode voltage should be 10 to 20% lower than the puncture voltage of the tape. A roll of calendered rubber tape is rewound, and the number of punctures is counted by means of a pulse counter (Merzheyevskiy, Kovchina, Inform.-tehnich. sb., M-vo elktrot. prom-sti SSSR, 1954, #57); the number of punctures should not exceed 1 or 2 per 1 m of the sample. A higher number of punctures indicates the inhomogeneity of rubber as a result of its poor manufacture or impurities.

R. M. L.

ASSOCIATION: "Tashkentkabel'" plant, Tashkent.  
Card 1/1

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7

LINKOV, Aleksandr Vladimirovich; SAPAROVA, A.L., redaktor; FRIDKIN, A.M.,  
tekhnicheskij redaktor

[Well-logging cables] Karottazhnye kabeli. Moskva, Gos. energ.  
izd-vo, 1956. 158 p. (MLRA 10:1)  
(Cables)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7"

GRODNEV, Igor' Izmaylovich; LAKERNIK, Rafail Moiseyevich; SHARLE, David Leonidovich; YEFIMOV, I.Ye., redaktor; LINKOV, A.V., redaktor; FRIDKIN, A.M., tekhnicheskiy redaktor

[Fundamentals of the theory and the production of communication cables] Osnovy teorii i proizvodstvo kabelei sviazi. Moskva, Gos. energ. izd-vo, 1956. 480 p.  
(Electric cables) (MLRA 9:11)

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7

LINKOV, A.V., inzhener.

~~Calculation of flexible cables. Vest.electroprom. 27 no.7:33-38~~  
Jl '56. (MLPA 10:P)

~~I.Mashine-issledovatel'skiy institut kabel'noy promyshlennosti.~~  
(Electric wire)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7"

LINKOV, A. S.

VINARSKIY, Yefim Naumovich, inzhener; LINKOV, Aleksandr Viktorovich,  
inzhener; KLORIK'YAN, V.Kh., otvetstvennyy redaktor; SHEDOV,  
L.V., redaktor izdatel'stva; KOROVENKOVA, Z.A., tekhnicheskiy  
redaktor; ALADOVA, Ye.I., tekhnicheskiy redaktor

[Assembling and dismantling sectional headframes] Sborno-rasbornye  
prokhodcheskie kopyry. Moscow, Ugletekhnizdat, 1957. 104 p.  
(Mining engineering) (MLRA 10:7)

LINKOV, Aleksandr Vladimirovich; SHARLE, D.L., red.; BORUNOV, N.I., tekhn. red.

[Electric cables for excavating machinery.] *Ekskavatornye kabeli.*  
Moskva, Gos. energ. izd-vo, 1958. 93 p. (MIR4 11:10)

(Electric cables)  
(Excavating machinery--Electric equipment)

KURITSKIY, Yelizar Isayevich.; LINKOV, Aleksandr Vladimirovich.; TIMOKHINA,  
V.I., red.; FRIDKIN, A.M., tekhn.red.

[Safety measures in plants of the electric machinery industry]  
Tekhnika bezopasnosti na zavodakh elektrotekhnicheskoi promyshlennosti.  
Moskva, Gos. energ. izd-vo, 1958. 439 p. (MIRA 11:12)  
(Electric machinery--Safety measures)

BUBLIKOV, Yevgeniy Vladimirovich, inzh.; VINARSKIY, Yerim Naumovich, inzh.; DANCHICH, Valeriy Valerianovich, inzh.; DOKUKIN, Oleg Semenovich, inzh.; LINKOV, Aleksandr Viktorovich, inzh.; TELEPNEV, Dmitriy Yakovlevich, inzh.; FEDOROV, Sergey Vasil'yevich, inzh.; FEDOROV, Georgiy Dmitriyevich, inzh.; YAKUSHIN, Nikolay Petrovich, kand.tekhn. nauk, inzh.; ZHADAYEV, V.G., otv.red.; SMIRNOV, L.V., red.izd-va; SABITOV, A., tekhn.red.

[Selection of equipment for vertical shaft sinking] Vygor oborudovaniia dlia prokhodki vertikal'nykh stvolov shakht. Moskva, Ugletekhnizdat, 1959. 251 p.

(MIRA 12:8)

1. Sotrudniki Ukrainskogo Nauchno-issledovatel'skogo instituta organizatsii i mekhanizatsii shakhtnogo stroitel'stva (UkrNIOMShS) (for all except Zhadayev, Smirnov, Sabitov).  
(Shaft sinking) (Mining machinery)

PRIVEZENTSEV, Vladimir Alekseyevich; ANISEMOV, B.V., inzh., retsenzent;  
TROITSKIY, I.D., kand.tekhn.nauk, retsenzent; NYKKOV, Ye.S.,  
kand.tekhn.nauk, retsenzent; LINKOV, A.V., inzh., red.;  
MATVEYEV, G.I., tekhn.red.

[Magnet wires with enameled and fiber-type insulation] Obmotochnye  
provoda s emalevoi i voloknistoi izoliatsiei. Izd.3., perer.  
Moskva, Gos.energ.izd-vo, 1959. 448 p. (MIRA 12:7)  
(Electric wire, Insulated)

BEZSONOV, Boris L'vovich; GORODETSKIY, Sergey Sergeyevich; GRODNEY,  
Igor' Izmaylovich; LINKOV, Aleksandr Vladimirovich; LYUBIMOV,  
Konstantin Aleksandrovich; MACHERET, Lev Il'ich; PRIVEZENTSEV,  
Vladimir Alekseyevich; SAPAROVA, A.L., red.; LARIONOV, G.Ye.,  
tekhn.red.

[Cables and wires] Kabeli i provoda. Pod obshchel red. V.A.  
Privezentseva i A.V.Linkova. Moskva, Gos.energ.izd-vo. Vol.1.  
[Fundamentals of theory, calculation, and construction] Osnovy  
teorii, raschet i konstruirovaniye. 1959. 559 p. (MIRA 13:2)  
(Electric cables) (Electric wires)

ISTOMINA, Nina Petrovna; LAKERNIK, Refail Moiseyevich; SHARLE, David Leonidovich; MALKIN, Kh.R., retsenzent; LINKOV, A.V., red.; ZHITNIKOVA, O.S., tekhn.red.

[Municipal telephone cables] Gorodskie telefonnye kabeli.  
Moskva, Gos.energ.izd-vo, 1960. 247 p.

(MIRA 14:1)

(Telephone lines)

VINARSKIY, Yefim Naumovich, inzh.; LINKOV, Aleksandr Viktorovich, inzh.;  
KLORIK'YAN, V.Kh., otv. red.; KOSTON'YAN, A.Ya., red. izd-va;  
BOLDYREVA, Z.A., tekhn. red.

[Headframes for shaft sinking] Kopry dlia prokhodki shakhtrykh  
stvolov. Moskva, Gosgortekhizdat, 1962. 182 p. (MIRA 15:5)  
(Shaft sinking--Equipment and supplies)

LIN'KOV, F.I.

From the work practice of the district committee of the Red Cross Organization. Zdrav.Ros.Feder. l no.9:22-24 S '57. (MIRA 10:11)

1. Predsedatel' rayonnogo komiteta Obshchestva Krasnogo Kresta.  
Ufimskiy rayon, Bashkirskaia ASSR.  
(RED CROSS)

LIN'KOV, G.I.; BORISOV, A.A., redaktor; SHIKIN, S.T., tekhnicheskiy redaktor

[Extracurricular work in mathematics] Vneklassnaia rabota po  
matematike. Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva  
prosveshcheniya RSFSR, 1954. 61 p. (MLRA 8:3)  
(Mathematics--Study and teaching)

ROZEN, G.M.; LINKOV, G.M.; ROGOV, Yu.A.

Press sheet feeder used for the removal and setting of large dies.  
Avt. prom. 27 no. 4:43 Ap '61. (MIRA 14:4)

1. Nauchno-issledovatel'skiy tekhnologicheskiy institut avtomobil'noy  
promyshlennosti.  
(Metalworking machinery)

LINKOV, G.M.; ORLOV, A.V.

Forging bracket rolls with an automatic manipulator. Avt.prom.  
28 no.2:40-43 F '62. (MIRA 15:2)

1. Nauchno-issledovatel'skiy institut avtomobil'noy promyshlennosti.  
(Rolls (Iron mills))

LIN'KOV, J M.

Petrolatum-kerosine coating for concrete forms. Lin'kov, Strörel. Prom. 35, No. 6, 24-6(1957).—A mixt. of 1 part petrolatum and 2-3 parts of kerosine prevents sticking under normal conditions, but for low-temp. work the ratio should be increased to 1:4. J. D. Cut.

My

LIN'KOV, I.M., inzh.; IVANOV, YU.M., prof., doktor tekhn.nauk, red.;  
BORODINA, I.S., red.izd-va; SOLNTSEVA, L.M., tekhn.red.

[Increasing the durability of wooden forms for making precast  
reinforced concrete elements] Voprosy povyshenija oborachivaemosti  
dereviannykh form dlja sbornogo zhelezobetona. Moskva, Gos. izd-vo  
lit-ry po stroit., arkhit. i stroit. materialam, 1958. 57 p.  
(Akademija stroitel'stva i arkhitektury SSSR. Institut stroitel'-  
nykh konstruktsii. Nauchnoe soobshchenie, no.5) (MIRA 11:11)

1. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR  
(for Ivanov).

(Concrete construction--Formwork)

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7

*LIN'KOV, I.*

LIN'KOV, I., inzh.; SHIPOV, B., inzh.; GURVICH, Yu., inzh.

Concrete forms made of lumber and steel. Stroitel' no.3:6 Mr '58.  
(Reinforced concrete construction--Formwork) (MIRA 11:2)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7"

LIM'KOV, I., inzh.

Selecting and using lubricants for molds and forms. Stroi. mat.  
4 no. 7:31-32 Jl '58. (MIRA 11:7)  
(Lubrication and lubricants)  
(Concrete construction--Formwork)

LIN'KOV, I.M., inzh.

Methods for increasing the durability of wooden forms in  
making autoclave products. Biul. stroi. tekhn. 15 no.8:18-21  
Ag '58. (MIRA 11:9)

1.Tsentral'nyy nauchno-issledovatel'skiy institut strelitel'noy  
konstruktsii.  
(Concrete construction--Formwork) (Autoclaves)

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7

LIN'KOV, I.M., inzh.

Testing the wood and nailed joints of reinforced concrete forms.  
Stroit. prom. 36 no. 6:32-34 '58. (MIRA 11:6)  
(Concrete construction--Formwork)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7"

LIN'KOV, I. M., Candidate Tech Sci (diss) -- "Investigation and development of methods of increasing the versatility of metal-wood forms for prefabricated reinforced concrete". Moscow, 1959. 22 pp (Acad Construction and Architecture USSR, Central Sci Res Inst of Structural Designs), 120 copies (KL, No 26, 1959, 126)

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7

LIN'KOV, I., kand.tekhn.nauk

Combined metal and wooden forms. Stroitel' no.1:30  
Ja '60. (MIRA 1:5)  
(Concrete construction--Formwork)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7"

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7

SHCHERBA, N.S., kand.tekhn.nauk, LIN'KOV, I.M., kand.tekhn.nauk

Use plastics in making casings and molds. Bet. i zhel.-  
bet. no.2:87-88 F '60. (MIRA 13:6)  
(Plastics) (Concrete construction--Formwork)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7"

LIN'KOV, L.M., kand.takhn.nauk

Asbestos cement panels for walls of industrial buildings.  
Prom. stroi. 39 no.5:36-41 '61. (MIRA 14:7)  
(Asbestos cement) (Concrete walls)

LIN'KOV, I.M., kand.tekhn.nauk; LOGINOVА, M.P., inzh.

Tests of three-layer asbestos-cement slabs with fibrolite  
insulation. Stroi. mat. 8 no.5:39-40 My '62. (MIRA 15:7)  
(Asbestos cement--Testing)  
(Sillimanite)

LIN'KOV, I.M., kand. tekhn. nauk; Prinimala uchastiye PARSHINTSEVA, V.A.,  
starshiy tekhnik

Tests conducted with wall panels with a wooden framework and  
asbestos cement coverings. Trudy TSNIISK no.26:5-41 '63.-  
(MIRA 16:8)

(Asbestos cement--Testing) (Walls)

LIN'KOV, I.M., kand. tekhn. nauk

Development and introduction of fibrolite-asbestos cement panels.  
Trudy TSNIISK no.26:62-106 '63. (MIRA 16:8)

(Asbestos cement) (Walls)

SHCHERBAKOVSKIY, D.Z.; LIN'KO, I.V.; MOROV, P.F.

Introducing a machine for cutting, bending, and rolling out  
tubes. Biul. tekhn.-ekon. inform. Gos. nauch.-issl. inst.  
nauch. i tekhn. inform. 18 no. 12:28-29 D '65 (MIRA 1941)

LIN'KOV, M.V., inzhener.

Planning increased labor productivity in the transport industries.  
Zhel.dor.transp. 38 no.10:49-54 0 '56. (MLRA 9:11)  
(Railroads—Employees)

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7

LIN'KOV, M.V.

[Work planning for railroad sections] Planirovanie truda na otdelenii  
zheleznoi dorogi. Moskva, 1959. 33 p. (MIRA 14:8)  
(Railroads)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7"

LIN'KOV, M.V., inzh.

Sources for the further increase of labor productivity in rail-road transportation. Zhel.dor.transp. 41 no.3:15-19 Mr '59.  
(MIRA 12:6)

(Railroads--Management)  
(Labor productivity)

LIN'KOV, Mikhail Vasil'yevich; KOLTUNOVA, M.P., red.; BOBROVA, Ye.N.,  
tekhn.red.

[Labor planning in a railway district] Planirovanie truda  
na otdelenii zheleznoi dorogi. Moskva, Vses.izdatel'sko-poligr.  
ob"edinenie M-va putei soobshcheniya, 1960. 74 p. (MIRA 14:1)

(Railroads--Production standards)

BELYUNOV, S.A., inzh.; DMITRIYEV, V.I., dots., kand. ekon. nauk; KUCHURIN, S.F.; LIN'KOV, M.V.; MULYUKIN, F.P.; NEDOPEKIN, G.K., inzh.; PUZYNYA, I.Ye., inzh.; RAYKHER, G.Kh., inzh.; TRUBACHEV, T.Ye., inzh.; TYVAN-CHUK, D.P., inzh.; UMBLIYA, V.E., kand. ekon. nauk; KHOKHLOV, N.F., dots. kand. ekon. nauk; CHUDOV, A.S., prof., doktor ekon. nauk; ERLIKH, V.S., inzh.; IVLIYEV, Ivan Vasil'yevich, red.; KRISHTAL', L.I., red.; KHITROV, P.A., tekhn. red.

[Planning in railroad transportation] Planirovaniye na zheleznodorozhnom transporte; spravochnik. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshchenie, 1961. 470 p. (MIRA 14:11) (Railroads--Management)

LIN'KOV, M.V., inzh.

"Labor productivity in railroad transportation" by T.M.  
Tuchkevich. Reviewed by M.V. Lin'kov. Zhel.dor.transp.  
44 no.5:94-96 My '62. (MIRA 15:5)  
(Railroads---Labor productivity)  
(Tuchkevich, T.M.)

ZAKHARENKO, Nikolay Nikolayevich; LIN'KOV, M.V., retsenzent; PESKOVA, L.N., red.; VOROTNIKOVA, L.F., tekhn. red.

[Technological progress and labor productivity in railroad transportation]Tekhnicheskii progreess i proizvoditel'nost' truda na Zhelezodorozhnom transporte. Moskva, Transzheldorizdat, 1962. 80 p.

(Railroads--Technological innovations)  
(Railroads--Labor productivity)

LIN'KOV, M.V.

Provide correct planning, but avoid the complication of the  
indices of labor productivity. Zhel.dor.transp. 46 no.12:  
48-50 D '64.

(MIRA 19:1)

1. Nachal'nik otdela Planovo-ekonomiceskogo upravleniya  
Ministerstva putey soobshcheniya.

L 5460-66 EWT(1)/EPA(w)-2/EWA(m)-2/EWA(h) IJP(c) AT  
ACC NR: AP5026710 SOURCE CODE: UR/0141/65/008/005/0948/0954

AUTHOR: Antakov, I. I.; Klimov, V. G.; Lin'kov, R. V.

ORG: Scientific Research Institute of Radio Physics at Gorky University (Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete)

TITLE: Application of a pulsed magnetic field in devices with a trochoidal electron beam

SOURCE: IVUZ. Radiofizika, v. 8, no. 5, 1965, 948-954

TOPIC TAGS: oscillation, millimeter wave generator, traveling wave, magnetic field

ABSTRACT: An experimental apparatus is described in which 8-mm oscillations were excited in a modified TWT by crossing a large pulsed magnetic field with a trochoidal electron beam. Part of the configuration, showing the comb delay anode and cathode, is shown in the figure. For an 8-mm wavelength, this structure gave a delay factor

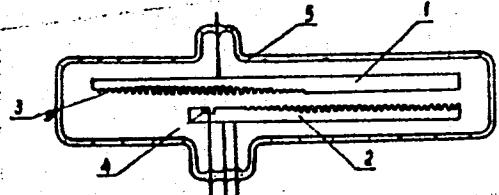


Fig. 1. Millimeter-wave oscillator

1 - Copper anode; 2, 3 - copper comb delays;  
4 - tantalum cathode; 5 - tube envelope.

UDC: 621.385.6

Card 1/2

L 5460-66

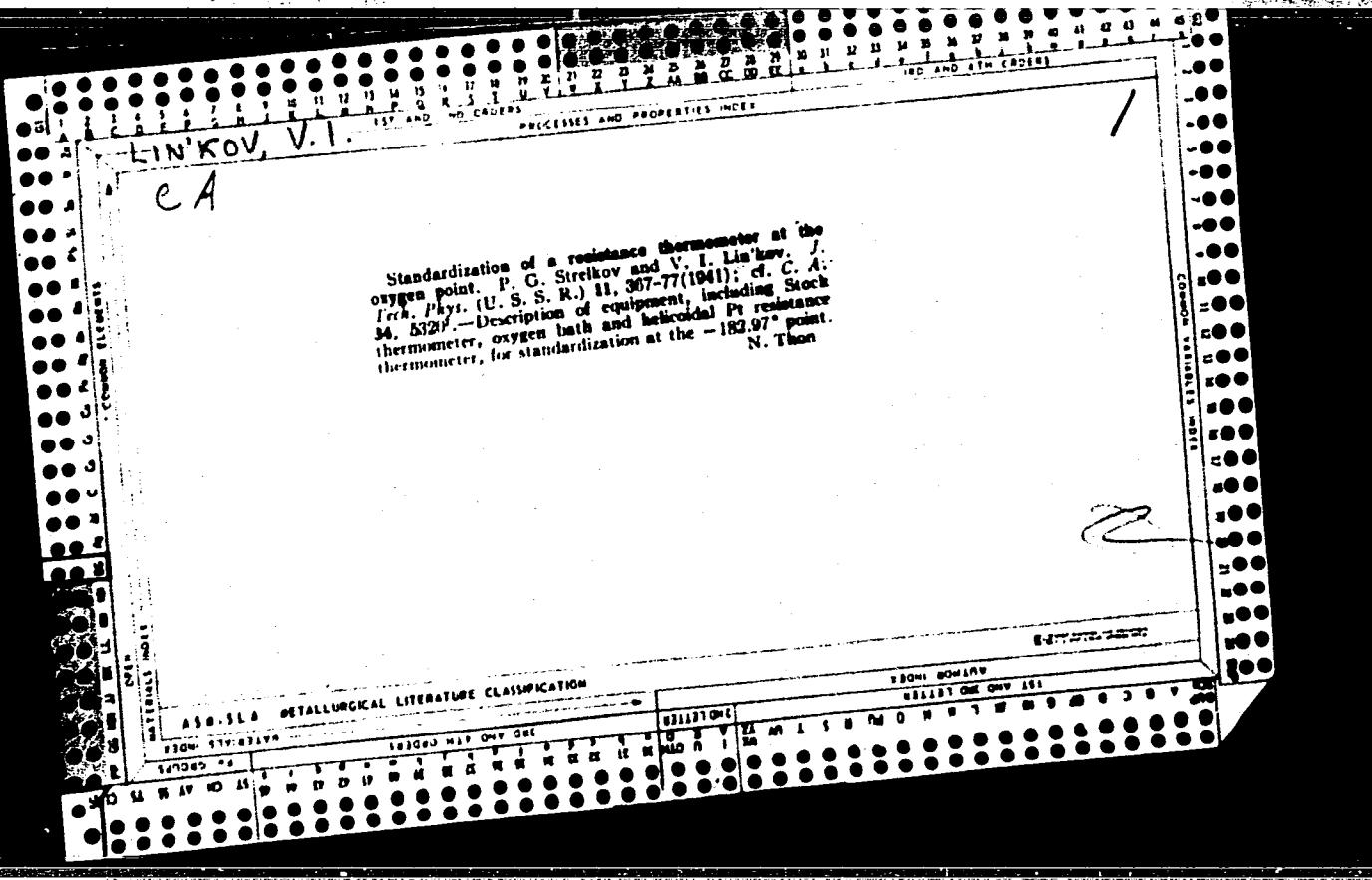
ACC NR: AP5026710

O

of 1.2—1.4. To obtain a desired oscillation in this type of device demands a very uniform magnetic field in the working volume between electrodes; in this case it was necessary to design complex coaxial coils to provide a field uniform within 0.1% throughout a volume of 0.3 x 0.5 x 3 cm. The tube cathode was also placed in a weaker field, approximately 15% of the pulsed field. A pulsed field (12—15 koe) was obtained by discharging capacitor banks into the coils at currents up to 2000 amp. Pulse width was 1.5  $\mu$ sec; the repetition period was about 15 sec. An 8-kv, 150- $\mu$ sec voltage pulse was simultaneously applied to the tube anode; variation of its synchronization with the magnetic field gave a limited degree of oscillation tuning control. Peak oscillatory outputs of 30 w were recorded at  $\lambda$  = 8—8.3 mm. Theoretically, CW oscillation is also producible in this way; however, in view of the huge currents involved, this would require either complex cooling of the coils or else achievement of a superconducting state. Another limiting factor is the distortion in the gap from stray fields caused by eddy currents in the electrodes. A theoretical analysis of this effect is given. Since this experiment was only a feasibility study, no attempt was made to determine the limits of generated power, frequency, or efficiency that might be attained. Orig. art. has: 4 figures and 3 formulas. [FSB: v.1, no.12]

SUB.CODE: EC/ SUBM DATE: 01Apr65/ ORIG REF: 007/ OTH REF: 007

Card 2/2 MD



LINKOV V. I.

536.531

2209. Production and calibration of a group of  
resistance thermometers with quartz frames. N.A.  
BRILLYANOV, V. I. LINKOV and P. G. STEFANKOV,  
J. Tech. Phys., USSR, 20, 335-44 (March, 1950) In  
Russian.

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7

LIN'KOV, V.I.

Modifications of the instruction 172-62. Izm.tekh. no.6:61-63 Je '64.  
(MIRA 17:12)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7"

LIN'KOV, N.A.

BRILLIANTOV, N. A.; STRELKOV, V. P.; LIN'KOV, V. P.  
LIN'KOV, V. P.

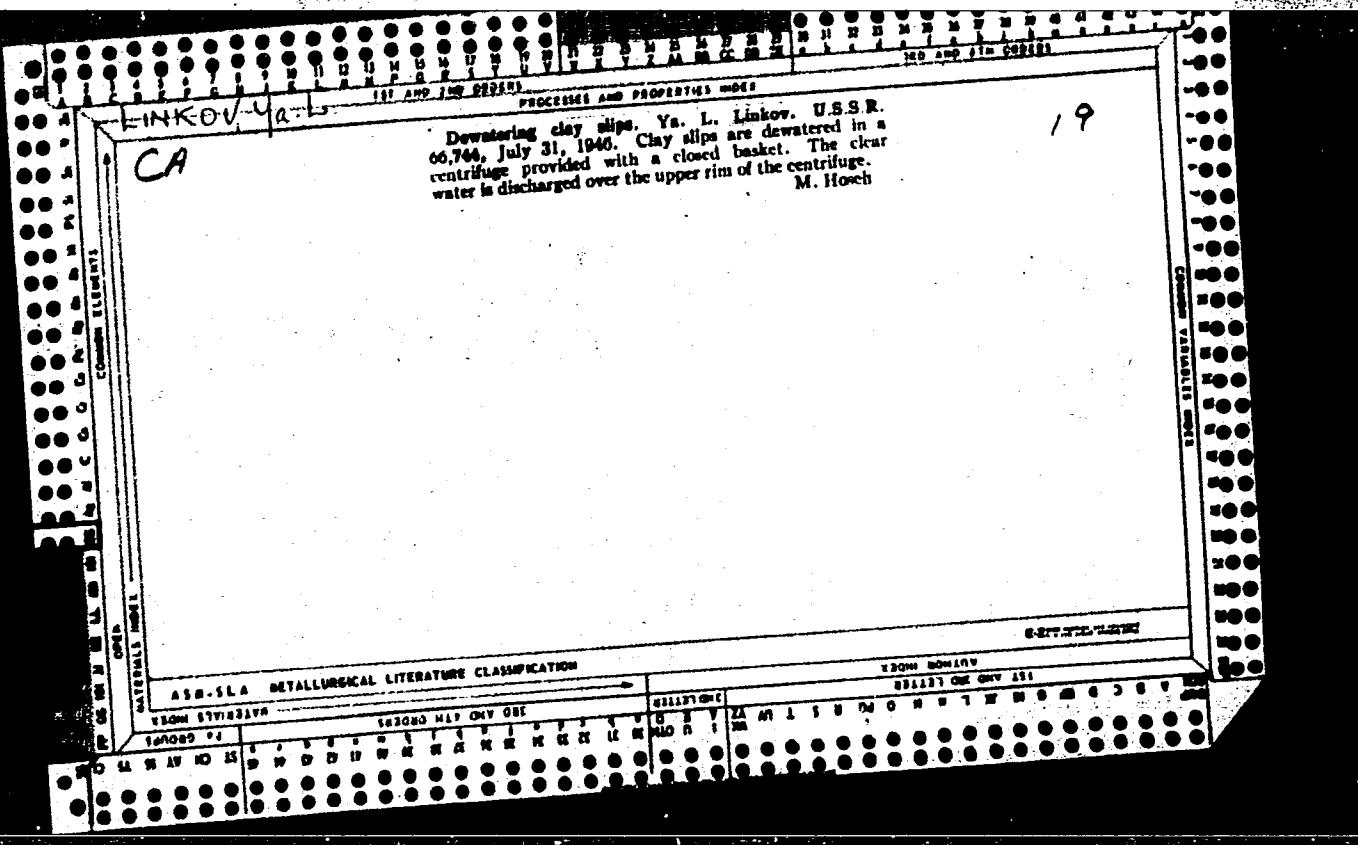
"The Production of Platinum Resistance Thermometers," Zhurnal Tekh Fiz, 20, 3,  
1950.

U-1763, 17 Mar 52

LINKOV, Ya.I.

The traffic safety regulations should be strictly enforced.  
Avtom., telem. i sviaz' 6 no.6:8-9 Je '62. (MIRA 15:7)

1. Starshiy pomoshchnik Glavnogo revizora po bezopasnosti  
dvizheniya. (Railroads—Safety regulations)



"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7

LINKOV, Y.A. L.

The mining of graphite ores Moskva, Gos. izd-vo lit-ry po stroit. materialam,  
1949. 47 p. (50-15549)

Tn845.L5

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7"

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7

Linkov, Y.A.L.

Vibratory ball mill. Yu. I. Linkov. U.S.S.R. 103,570.  
Aug. 25, 1955. M. Huch. phys. 1

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7"

KHOLIN, N.D., prof.; LINKOV, Ya.L., inzh.

Standard plans for gravel-grading plants for deposits which  
must be worked by hydraulic engineering machinery. Stroi. mat.  
8 no.8:18-20 Ag '62. (MIRA 15:9)  
(Sand and gravel plants) (Dredging machinery)

ARTAMONOV, O.F., inzh.; KAZAKEVICH, V.Ye., inzh.; LINKOV, Ye.I.,  
inzh.; SUKHAREVA, R.A., red.; KAMYSHNIKOVA, A.A., tekhn.red.

[Collection of Russian and foreign patents; semiconductors  
and their applications] Sbornik ot estvennykh i zarubezh-  
nykh izobretenii; poluprovodniki i ikh primenie. Moskva,  
(MIRA 16:9)  
1963. 77 p.

1. TSentral'nyy nauchno-issledovatel'skiy institut patentnoy  
informatsii i tekhniko-ekonomiceskikh issledovaniy.  
(Semiconductors--Patents) (Transistors--Patents)

LIN'KOV, Ye.I.

Approximate solution of some nonlinear equations. Uch.zap.  
MOPI 77:195-202 '59. (MIRA 13:5)  
(Integral equations)

16 4600

32511  
S/044/61/000/011/034/049  
C111/C444

AUTHOR: Lin'kov, Ye.

TITLE: On the method of quickest descent for non-linear equations

PERIODICAL: Referativnyy zhurnal, Matematika, no. 11, 1961, 76,  
abstract 11B413. (Uch. zap. Mosk. obl. ped. in-ta, 1960,  
96, 221-230)TEXT: In the real Hilbert space  $H$  the equation

$$P(x) = 0 \quad (1)$$

is investigated according to the method of quickest descent. Let  $\gamma(t)$  be a real nonnegative increasing function, given on the positive semi-axis, and satisfying the conditions:  $\gamma(0) = 0$ ,  $\lim_{t \rightarrow \infty} \gamma(t)$ ; let  $\gamma^{-1}$  be the inverse function.

Theorem 1: The following conditions be satisfied:

1. For all  $x, h \in H$  there holds

$$K \|h\|^2 \geq (Q'(x)h, h) \geq \|h\| \gamma(\|h\|), \quad K=\text{const}, \quad Q(x) = (P'(x))^* P(x).$$

Card 1/5

32511

S/044/61/000/011/034/049

On the method of quickest descent . . . C111/C444

2. The equation (1) has the solution  $x^*$  in H.

Then the process

$$x_{n+1} = x_n - \varepsilon_n Q(x_n), \quad \varepsilon_n = \frac{2}{\alpha K} \left[ \gamma^{-1} (\|Q(x_n)\|) \right]^{-1} x \gamma \left( \frac{\|P(x_n)\|^2}{2\|Q(x_n)\|} \right), \quad \alpha > 1$$

converges for arbitrary initial approximation to the solution of (1), and for the estimation of the error there holds the formula

$$\|x_n - x^*\| \leq \gamma^{-1} (\|Q(x_n)\|).$$

Theorem 2: If the potential operator P(x) satisfies the condition

$$\|h\| \gamma(\|h\|) \leq (P'(x)h, h) \leq K \|h\|^2, \quad K = \text{const},$$

then the iteration process  $x_{n+1} = x_n - \varepsilon P(x_n)$  converges for arbitrary initial approximation to the solution of (1) for  $0 < \varepsilon < 2K^{-1}$ , and the estimation of the error is

$$\|x_n - x^*\| \leq \gamma^{-1} (\|P(x_n)\|), \quad P(x^*) = 0.$$

Card 2/5

32511

S/044/61/000/011/034/049

C111/C444

On the method of quickest descent . . .

Theorem 2': The potential operator  $P(x)$  is assumed to satisfy the conditions:  $\|h\| \gamma(\|h\|) \leq (P'(x)h, h)$ , the derivative  $P'(x)$  be bounded in the sphere  $S = \{x : \|x - x_0\| \leq 2\gamma^{-1}(\|P(x_0)\|)\}$  i. e.

$\|P'(x)\| \leq K$  for  $x \in S$ . Then the process

$$x_{n+1} = x_n - \frac{2}{\alpha K^2} \left[ \gamma^{-1}(\|P(x_n)\|) \right]^{-1} x - \gamma \left( \frac{1}{K} \|P(x_n)\| \right) P(x_n), \alpha > 1$$

converges to the solution of (1), if  $x_0$  is the initial approximation. and the estimation of the error is

$$\|x_n - x^*\| \leq \gamma^{-1}(\|P(x_n)\|).$$

Theorem 3: The derivative  $P'(x)$  of the potential operator  $P(x)$  is assumed to satisfy the conditions  $(P'(x)h, h) \geq 0$ ,  $\|P'(x)h\| \leq K\|h\|$ .

$$(P'(x+t_1h)h, P'(x+t_2h)h) \geq (B^{-1})^2 \|h\|^2, 0 < t_1, t_2 < 1, K = \text{const.}$$

Then - if (1) possesses a solution - the iteration process

$$x_{n+1} = x_n - \varepsilon P(x_n)$$

converges to this solution for arbitrary initial

Card 3/5

32511  
S/044/61/000/011/034/049  
C111/C444

On the method of quickest descent . . . approximation for  $0 < \varepsilon < 2K^{-1}$ , the estimation of the error is  $\| x_n - x^* \| \leq B \| P(x_n) \|$ ,  $P(x^*) = 0$ .  
 Theorem 4: The following conditions be satisfied: 1.  $\| h \| \Gamma (\| h \|) \leq (P'(x)h, h)$ ,  $\Gamma(t)$  being a nonnegative function of nonnegative arguments; 2.  $\Gamma$  satisfies the inequalities

$$\Gamma'(t) \leq \frac{\Gamma(t)}{t} \leq \frac{1}{2} \left( \frac{1}{\varepsilon_0} + M^2 \varepsilon_0 \right), \quad t \leq \varepsilon_0 t_0, \quad t_0 = \| P(x_0) \|.$$

$$\| P'(x_0) \| \leq M, \quad \frac{1}{2} M^2 \varepsilon_0 \leq \frac{\Gamma(\varepsilon_0 t_0)}{\varepsilon_0 t_0}.$$

Then (1) possesses a solution, and the process  $x_{n+1} = x_n - \varepsilon_n P(x_n)$  converges to it, starting with  $x_0$  for  $\varepsilon = \varepsilon_0$ . The estimation of the error is

Card 4/5

32511

S/044/61/000/011/034/049

On the method of quickest descent . . . C111/C444

$$\|x_n - x^*\| \leq \varepsilon_0 t_0 [1-G(\varepsilon_0, t_0)]^{-1} G^n(\varepsilon_0, t_0),$$

$$G(\varepsilon_0, t_0) = \sqrt{M^2 \varepsilon_0^2 - 2t_0^{-1}} \Gamma(\varepsilon_0, t_0) + 1 < 1, P(x^*) = 0.$$

[Abstracter's note: Complete translation.]

X

Card 5/5

LIN'KOV, Ye.I.

Method of the fastest slope for nonlinear equations. Uch.  
zap. MCPI 96:221-231 '60. (MIRA 16:7)

(Calculus, Operational)

LIN'KOV, YE. M.

"A New Method of Multichannel Oscillographic Recording of Seismic Waves," an article in Scientific Notes of the Leningrad Order of Lenin State University ineni A. A. Zhdanov, No. 210, Physics Institute, Physical Science Series, No. 9, Geophysics, 1956, 190 pp.

SIM: 1360

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7

LIN'KOV, Ya.M.

Four-channel electronic oscillograph for recording seismic oscillations. Uch.sap.Len.un. no.210:93-99 '56. (MLRA 9:8)  
(Oscillograph) (Seismology)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000930010010-7"

LIN'KOV, Ye.M.

New multi-channel method for oscillograph recording of seismic  
waves. Uch.zap.Len.ia. no.210:100-104 '56. (MLRA 9:8)  
(Oscillograph) (Seismology)

LINKOV, V. M.

621.317.755

1291. AN EIGHT-CHANNEL CATHODE-RAY OSCILLOGRAPH  
FOR THE INVESTIGATION OF NON-STATIONARY PROCESSES.

E. M. Linkov

Vestnik Leningrad Univ., Ser. Fiz., Khim., 1957, No. 10, 60-64,

In Russian, with summary in English.

Details are given of a double-beam cathode-ray tube with four-channel electronic switching circuit by means of which eight signals  
can be recorded on a moving cine film. C.R.S. Mandr. 11

LIN'KOV, Ye.M.

Elastic properties of ice and methods for studying these properties  
[with summary in English]. Vest. IGU 12 no.16:57-68 '57. (MIRA 10:11)  
(Ice) (Elasticity)

LIN'KOV, Ye.M., Cand Phys-Math Sci —(disc) " Study of elastic properties of an unbroken ice cover in the Arctic by the seismic method." Len. 1958. 11 pp (Len Order of Lenin State Univ im A.A. Zhdanov)  
100 copies (KL, 24-58,115)

-5-

LINKOV, Ye. M.

AUTHOR:

Lin'kov, Ye. M.

54-1-2/17

TITLE:

The Study of the Elastic Properties of the  
Arctic Ice Cap (Izuchenie uprugikh svoystv ledyanogo pokrova  
v Arktike)

PERIODICAL:

Vestnik Leningradskogo Universiteta Seriya Fiziki  
i Khimii (Nr 1), 1958, Nr 4,

ABSTRACT:

Very few data are at present available concerning the elasticity of the cover of ice in the arctic zone. What information there is, is mainly based upon the values obtained by Oliver, Kreri and Kotell (ref. 1) during the time from 1950-1952. The data concerning the elastic characteristics of the cover of ice in connection with temperature conditions are of great importance both for navigation and for the establishments of various plants. For the purpose of investigating the rules governing the behavior of the elastic properties of the cover of ice seismic investigations were carried out in the spring of 1957 on the ice around Cape Shmidt. These seismic investigations were carried out besides other investigations of the physical

Card 1/4

The Study of the Elastic Properties of the Arctic Ice Cap 54-1-2/17

and mechanical properties (structure, thermal conditions etc.) of the ice. The following organizations took part in these investigations: The expedition of the Artic Institute (Laboratory of I. S. Peschanskiy) in cooperation with the Chair for the Physics of the Earth's Crust at Leningrad University. The object investigated was a cover of ice which was one year old and had formed in the fall. The structure of the ice was one of hexagonal, needle-shaped crystallization; the crystals had a length of 15-20 mm, their diameter was 7-8 mm. The geometrical axes were vertical to the surface. At the beginning of the investigation the thickness of the ice cover varied between 1,9 and 2,1 m. At the end of the investigation the thickness was between 1,3 and 1,4 m. The water was 7-8 m deep. The curves of vibration showed that the erection of seismographs (on hard snow, on pure ice, on ice covered with water (5-8 cm), or frozen into the cover of ice) exercised no influence whatever. The mechanical impact was carried out by means of a seismical ram, which consisted of a tripod of 2 m height, a winch, and a cylindrical load with spherical basis weighing 40 kg. By means of this device both

Card 2/4

The Study of the Elastic Properties of the Arctic Ice Cap

54-1-2/17

vertical and horizontal impacts were carried out. In both cases the impact took place at a distance of 0,5 m from the seismograph. Together with the seismical investigations measurements of temperature were carried out. The temperature was measured by means of telescope-system thermometers on the horizons of 50, 100 and 150 cm. It may be seen from the diagram that the amounts of the elasticity moduli depend non-linearly on the temperature of the cover of ice. At a temperature of -2° the velocity of the modifications of the electricity modulus increases noticeably. This is probably due to the increased migration of salt- and melted water. The moduli of ice elasticity were measured within the regular interval beginning with the middle of May and ending at the end of June 1957. Recording of the elastic waves was carried out by means of an 8-channel electronic oscillograph and devices of the seismical station. The latter consisted of a train oscillograph and of transistor amplifiers. Local and general significations of Young's modulus for arctic ice and the temperature dependence of the elasticity modulus at natural conditions were obtained as a result of the investigations carried out. The author thanks the collaborators

Card 3/4

The Study of the Elastic Properties of the Arctic Ice Cap

54-1-2,17

of the ANII N. P. Alekseyev, V. I. Arkhipov and A. N. Listov for the support they rendered in carrying out this work.

There are 2 figures, 1 table, and 3 references, 2 of which are Slavic

SUBMITTED: October 5, 1957

AVAILABLE: Library of Congress

1. Ice-Arctic regions
2. Ice-Formations
3. Ice-Elasticity
4. Ice-Physical properties

Card 4/4

5,9300

S/049/61/000/002/010/012  
D242/D301

AUTHORS: Lin'kov, Ye. M. and Tripol'nikov, V. P.

TITLE: A magnetoelectronic seismograph

PERIODICAL: Akademiya nauk SSSR. Seriya geofizicheskaya.  
Izvestiya, no. 2, 1961, 259-260

TEXT: The electrodynamic and electromagnetic seismographs described by Ye. F. Savarenskiy and D. P. Kirnos (Ref. 1: Elementy seismologii i seismometrii (Elements of Seismology and Seismometry) Gostekhiteoretizdat, Moscow, 1955) are the two principal types in seismology at present, but their use for magnetic recording of seismic wave's and for transmission of seismic signals by radio has met with considerable difficulties, mainly as a result of the relatively low sensitivity of these two seismographs. Electronic seismographs and those with a photoelectric recorder have found little application owing to their complex design. The highly-sensitive and simply-designed magnetoelectronic seismograph developed at the Leningrad State University is a horizontal pendulum resembling the Kirnos horizontal seismograph. Its design is shown in the

Card 1/5

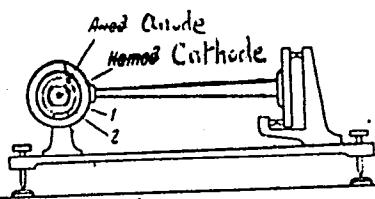
22432

S/049/61/000/002/010/012  
D242/D301

## A magnetoelectronic seismograph

following diagram where 1 denotes a circular magnet generating a field-strength of about 200 oersteds along the axis of the seismograph and 2 is an electronic lamp placed inside this magnet. The seismograph has electromagnetic damping accomplished by means of a coil in the field of the magnet. During oscillations of the pendulum in relation to the lamp a stream of electrons appears under the effect of the applied magnetic field. Since the radius curvature R for the trajectory of the electrons is related to the field strength H by

$$R = \frac{1}{\mu H} \sqrt{\frac{2m}{e}} u$$



Фиг. 1. Схема магнитоэлектронного сейсмографа  
1 — колыцевой магнит; 2 — электроплазм лампа  
(в разрезе)

Fig. 1

Card 2/5

22432

S/049/61/000/002/010/012

D242/D301

**A magnetoelectronic seismograph**

(where  $\mu$  is the magnetic permeability,  $u$  is the accelerating difference of the potentials,  $e$  is the electron charge and  $m$  is the electron mass), the effective surface of the anode, and hence the anodic current of the lamp, will vary with any change in the field. To obtain the highest sensitivity the lamp is placed so that the anode is in the area of the maximum gradient of the magnetic field. Variations in the anodic current are linearly related to movements of the magnet during relatively small oscillations of the pendulum or when the field gradient remains constant within the anode; this linear relationship is maintained for amplitudes of movement of not more than 1 - 2 mm. The three electric circuits of the seismograph are also illustrated. During horizontal suspension of the pendulum the natural period is determined by the force of the magnetic reaction between the lamp electrodes and magnet, i.e. by

$$T = 2\pi \sqrt{\frac{md^5}{P_1 P_2}},$$

where  $m$  is the inertial mass,  $d$  the magnitude of air clearance

Card 3/5

~~X~~

22432

S/049/61/000/002/010/012  
D242/D301**A magnetoelectronic seismograph**

between the lamp electrodes and magnet and  $P_1$  and  $P_2$  the magnetic moments of the lamp electrodes and magnet. The seismograph was adjusted to a natural oscillation period of 7 sec for  $d = 2$  cm and  $m = 0.6$  kg, but this may be increased either by increasing  $d$  or using a special lamp with non-magnetic electrodes. It is sensitive to displacements of 60 mV/mC; the sensitivity does not depend on amplitude for pendulum oscillations of  $\leq 1 - 2$  mm. In conclusion the author notes the high sensitivity of this simple seismograph which enables it to be used for broadcasting seismic signals, for the magnetic, electron-ray and galvanometric recording of seismic waves and also for measuring the gradients of the Earth's surface (sensitivity = 50 mV/sec). There are 2 figures and 3 references: 1 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: J. A. Volk, The electronic seismograph. Bull. Seism. Soc. Amer., No 2, 1950 and J. A. Volk, The photoelectric seismograph. Bull. Seism. Soc. Amer., No 3, 1950.

Card 4/5

22432  
S/049/61/000/002/010/012  
D242/D301

A magnetoelectronic seismograph

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A.  
Zhdanova (Leningrad State University im. A. A.  
Zhdanov)

SUBMITTED: July 18, 1960

X

Card 5/5

Z7598

S/049/61/000/009/002/004  
D214/D304

3.9300 (1019, 1107, 1327)

AUTHOR: Lin'kov, Ye.M.

TITLE: Magnetron systems of transforming seismic into electrical oscillations

PERIODICAL: Akademiya nauk SSSR. Izvestiya, Seriya geofizicheskaya, no. 9, 1961, 1373 - 1376

TEXT: Magnetron systems of transforming seismic into electric oscillations belong to the class of parametric systems. Such systems exhibit a relatively high sensitivity, their construction is simple, they respond to displacement and permit variation within a wide range of the output impedance. In the present article the author discusses briefly the principle of operation of magnetron systems and their different circuit arrangements. The magnetron characteristics are discussed and given for the pentode 12Ж1Л (12Zh1L) and 6Ж5Б (6Zh5B) in the form of the so-called "magneto-anode" characteristics, from it may be seen that with mechanical

Card 1/4

Magnetron systems of transforming ...

27598

S/049/61/000/009/002/004

D214/D304

displacement of the moving element of the magnetron (a pentode gradually being inserted into a magnetic field), the mechanical displacement is reflected in the change of current between the anode and screen-grid. The magnetron system of seismic recorders consists therefore, of two main parts: an electron tube and a permanent magnet. Various tube circuit configurations are schematically given, for voltage current HF and filtering, transformations of seismic oscillations. A transforming system for galvanometric registration, or for registration of very low frequency oscillations with d.c. amplification and using a 6Zh15B tube has the sensitivity 1.5 - 2 microamp/micron or 15mV/micron. A magnetron transducer consisting of a ring magnet and of the 6Zh15B tube reduces the self-period of the half-second beacon only to 1~~0~~ - 1.5 sec owing to the magnetic elasticity; such a transducer could be easily installed in the Kirnos seismographs [Abstractor's note: Kirnos is transliterated from Russian]. The stability of operation and the sensitivity limits of magnetron systems are stated to be determined by the anode current fluctuations which usually do not exceed  $10^{-8}$ - $10^{-9}$  amp.

Card 2/4